



30 JUN 2005

(43) International Publication Date
15 July 2004 (15.07.2004)

PCT

(10) International Publication Number
WO 2004/059499 A2(51) International Patent Classification⁷: G06F 13/16

Jan [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(21) International Application Number: PCT/IB2003/005709

(74) Agent: DE JONG, Durk, J.; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(22) International Filing Date: 26 November 2003 (26.11.2003)

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English
(26) Publication Language: English
(30) Priority Data: 02080598.2 30 December 2002 (30.12.2002) EP

(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

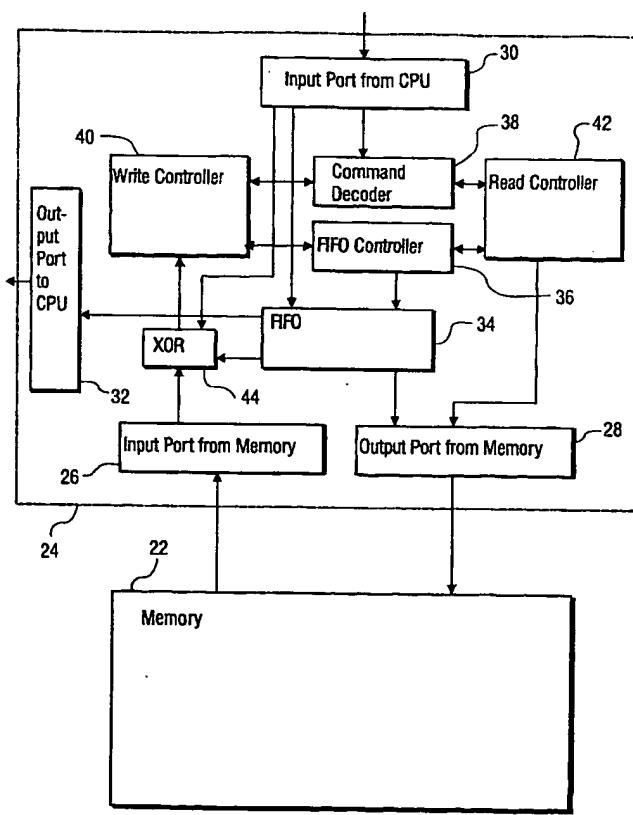
(71) Applicant (for all designated States except US): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventor; and

(75) Inventor/Applicant (for US only): HOOGERBRUGGE,

[Continued on next page]

(54) Title: MEMORY CONTROLLER AND METHOD FOR WRITING TO A MEMORY



(57) **Abstract:** The invention provides a controller for a memory having at least one memory cell, that involves a higher cost for writing than for reading. The memory cell is allocated to a first address information and adapted to store memory data. The memory controller of the invention comprises a register. A write controller connected with said register and said memory is adapted to receive a write request comprising said first address information and first write data allocated thereto, ascertain whether said first address information is stored in said register. If yes, the write controller compares said first write data with second write data of an earlier write request in said register allocated to said first address information. If no, it compares said first write data with said memory data allocated to the first address information. The write controller further forwards said first address information and said first write data to said register, respectively, and initiates a write operation of said first or second write data, respectively, from said register to said memory, if the first or second write data, respectively, is different from said memory data. With the memory controller of the invention write power can be saved while providing continuous access to the memory.